

Practitioner's Docket No. 770P009584-US(PAR)

CHAPTER II

Preliminary Classification:

Proposed Class:

Subclass:

NOTE: "All applicants are requested to include a preliminary classification on newly filed patent applications. The preliminary classification, preferably class and subclass designations, should be identified in the upper right-hand corner of the letter of transmittal accompanying the application papers, for example 'Proposed Class 2, subclass 129.'" M.P.E.P., § 601, 7th ed.

TRANSMITTAL LETTER
TO THE UNITED STATES ELECTED OFFICE (EO/US)

(ENTRY INTO U.S. NATIONAL PHASE UNDER CHAPTER II)

INTERNATIONAL APPLICATION NO.	INTERNATIONAL FILING DATE	PRIORITY DATE CLAIMED
PCT/US99/25508	29 October 1999	29 October 1998
TITLE OF INVENTION		
METHOD AND SYSTEM FOR SHIPPING/MAILING		
APPLICANT(S)		
Rana DUTTA, Fetneh ESKANDARI, Thomas C. LEIRER, James M. MATTERN, Richard H. ROSEN		

Box PCT
Assistant Commissioner for Patents
Washington D.C. 20231
ATTENTION: EO/US

CERTIFICATION UNDER 37 C.F.R. § 1.10*
(Express Mail label number is mandatory.)
(Express Mail certification is optional.)

I hereby certify that this Transmittal Letter and the papers indicated as being transmitted therewith is being deposited with the United States Postal Service on this date 27 April 2001, in an envelope as "Express Mail Post Office to Addressee" Mailing Label Number EL627426323US, addressed to the: Assistant Commissioner for Patents, Washington, D.C. 20231.

Debra G. Conrad

(type or print name of person mailing paper)

Debra G. Conrad

Signature of person mailing paper

WARNING: Certificate of mailing (first class) or facsimile transmission procedures of 37 C.F.R. § 1.8 cannot be used to obtain a date of mailing or transmission for this correspondence.

***WARNING:** Each paper or fee filed by "Express Mail" must have the number of the "Express Mail" mailing label placed thereon prior to mailing. 37 C.F.R. § 1.10(b).
"Since the filing of correspondence under § 1.10 without the Express Mail mailing label thereon is an oversight that can be avoided by the exercise of reasonable care, requests for waiver of this requirement will not be granted on petition." Notice of Oct. 24, 1996, 60 Fed. Reg. 56,439, at 56,442.

(Transmittal Letter to the United States Elected Office (EO/US) [13-18]—page 1 of 8)

09/830498-07240

NOTE: To avoid abandonment of the application, the applicant shall furnish to the USPTO, not later than 20 months from the priority date: (1) a copy of the international application, unless it has been previously communicated by the International Bureau or unless it was originally filed in the USPTO; and (2) the basic national fee (see 37 C.F.R. § 1.492(a)). The 30-month time limit may not be extended. 37 C.F.R. § 1.495.

WARNING: Where the items are those which can be submitted to complete the entry of the international application into the national phase are subsequent to 30 months from the priority date the application is still considered to be in the international state and if mailing procedures are utilized to obtain a date the express mail procedure of 37 C.F.R. § 1.10 must be used (since international application papers are not covered by an ordinary certificate of mailing—See 37 C.F.R. § 1.8.

NOTE: Documents and fees must be clearly identified as a submission to enter the national state under 35 U.S.C. § 371 otherwise the submission will be considered as being made under 35 U.S.C. § 111. 37 C.F.R. § 1.494(f).

- I. Applicant herewith submits to the United States Elected Office (EO/US) the following items under 35 U.S.C. § 371:
- a. ☒ This express request to immediately begin national examination procedures (35 U.S.C. § 371(f)).
 - b. ☒ The U.S. National Fee (35 U.S.C. § 371(c)(1)) and other fees (37 C.F.R. § 1.492) as indicated below:

2. Fees

09/830498
JC19 Rec'd PCT/PTO 27 APR 2001

CLAIMS FEE	(1) FOR	(2) NUMBER FILED	(3) NUMBER EXTRA	(4) RATE	(5) CALCULATIONS
<input type="checkbox"/>	TOTAL CLAIMS				
	40.00	40 - 20 =	20	× \$18.00 =	\$ 360.00
	INDEPENDENT CLAIMS				
	2	2 - 3 =	0	× \$80.00	0
	MULTIPLE DEPENDENT CLAIM(S) (if applicable)				+ \$270.00
BASIC FEE**	<input checked="" type="checkbox"/> U.S. PTO WAS INTERNATIONAL PRELIMINARY EXAMINATION AUTHORITY Where an International preliminary examination fee as set forth in § 1.482 has been paid on the international application to the U.S. PTO: <input checked="" type="checkbox"/> and the international preliminary examination report states that the criteria of novelty, inventive step (non-obviousness) and industrial activity, as defined in PCT Article 33(1) to (4) have been satisfied for all the claims presented in the application entering the national stage (37 C.F.R. § 1.492(a)(4)) \$100.00 <input type="checkbox"/> and the above requirements are not met (37 C.F.R. § 1.492(a)(1)) \$690.00 <input type="checkbox"/> U.S. PTO WAS NOT INTERNATIONAL PRELIMINARY EXAMINATION AUTHORITY Where no international preliminary examination fee as set forth in § 1.482 has been paid to the U.S. PTO, and payment of an international search fee as set forth in § 1.445(a)(2) to the U.S. PTO: <input type="checkbox"/> has been paid (37 C.F.R. § 1.492(a)(2)) \$710.00 <input type="checkbox"/> has not been paid (37 C.F.R. § 1.492(a)(3)) \$1,000. <input type="checkbox"/> where a search report on the international application has been prepared by the European Patent Office or the Japanese Patent Office (37 C.F.R. § 1.492(a)(5)) \$860.00				100.00
	Total of above Calculations				= 460.00
SMALL ENTITY	Reduction by 1/2 for filing by small entity, if applicable. Affidavit must be filed also. (note 37 C.F.R. § 1.9, 1.27, 1.28)				-
	Subtotal				
	Total National Fee				\$ 460.00
	Fee for recording the enclosed assignment document \$40.00 (37 C.F.R. § 1.21(h)). (See Item 13 below). See attached "ASSIGNMENT COVER SHEET".				
TOTAL	Total Fees enclosed				\$ 460.00

(Transmittal Letter to the United States Elected Office (EO/US) [13-18]—page 3 of 8)

09/830498

*See attached Preliminary Amendment Reducing the Number of Claims.

- i. ☒ A check in the amount of \$460.00 to cover the above fees is enclosed.
- ii. ☐ Please charge Account No. _____ in the amount of \$ _____.
A duplicate copy of this sheet is enclosed.

****WARNING:** "To avoid abandonment of the application the applicant shall furnish to the United States Patent and Trademark Office not later than the expiration of 30 months from the priority date: * * * (2) the basic national fee (see § 1.492(a)). The 30-month time limit may not be extended." 37 C.F.R. § 1.495(b).

WARNING: If the translation of the international application and/or the oath or declaration have not been submitted by the applicant within thirty (30) months from the priority date, such requirements may be met within a time period set by the Office. 37 C.F.R. § 1.495(b)(2). The payment of the surcharge set forth in § 1.492(e) is required as a condition for accepting the oath or declaration later than thirty (30) months after the priority date. The payment of the processing fee set forth in § 1.492(f) is required for acceptance of an English translation later than thirty (30) months after the priority date. Failure to comply with these requirements will result in abandonment of the application. The provisions of § 1.136 apply to the period which is set. Notice of Jan. 3, 1993, 1147 O.G. 29 to 40.

3. ☒ A copy of the International application as filed (35 U.S.C. § 371(c)(2)):

NOTE: Section 1.495 (b) was amended to require that the basic national fee and a copy of the international application must be filed with the Office by 30 months from the priority date to avoid abandonment. "The International Bureau normally provides the copy of the international application to the Office in accordance with PCT Article 20. At the same time, the International Bureau notifies applicant of the communication to the Office. In accordance with PCT Rule 47.1, that notice shall be accepted by all designated offices as conclusive evidence that the communication has duly taken place. Thus, if the applicant desires to enter the national stage, the applicant normally need only check to be sure the notice from the International Bureau has been received and then pay the basic national fee by 30 months from the priority date." Notice of Jan. 7, 1993, 1147 O.G. 29 to 40, at 35-36. See item 14c below.

- a. ☐ Is transmitted herewith.
- b. ☒ is not required, as the application was filed with the United States Receiving Office.
- c. ☒ has been transmitted
 - i. ☒ by the International Bureau.
Date of mailing of the application (from form PCT/1B/308): 5/11/00.
 - ii. ☐ by applicant on _____
Date

4. ☒ A translation of the International application into the English language (35 U.S.C. § 371(c)(2)):

- a. ☐ is transmitted herewith.
- b. ☒ is not required as the application was filed in English.
- c. ☐ was previously transmitted by applicant on _____
Date
- d. ☐ will follow.

5. ☒ Amendments to the claims of the International application under PCT Article 19 (35 U.S.C. § 371(c)(3)):

NOTE: The Notice of January 7, 1993 points out that 37 C.F.R. § 1.495(a) was amended to clarify the existing and continuing practice that PCT Article 19 amendments must be submitted by 30 months from the priority date and this deadline may not be extended. The Notice further advises that: "The failure to do so will not result in loss of the subject matter of the PCT Article 19 amendments. Applicant may submit that subject matter in a preliminary amendment filed under section 1.121. In many cases, filing an amendment under section 1.121 is preferable since grammatical or idiomatic errors may be corrected." 1147 O.G. 29-40, at 36.

- a. ☐ are transmitted herewith.
- b. ☐ have been transmitted
 - i. ☐ by the International Bureau.
Date of mailing of the amendment (from form PCT/1B/308): _____
 - ii. ☐ by applicant on (date) _____
Date
- c. ☒ have not been transmitted as
 - i. ☒ applicant chose not to make amendments under PCT Article 19.
Date of mailing of Search Report (from form PCT/ISA/210.): 3/31/00
 - ii. ☐ the time limit for the submission of amendments has not yet expired.
The amendments or a statement that amendments have not been made will be transmitted before the expiration of the time limit under PCT Rule 46.1.

6. ☒ A translation of the amendments to the claims under PCT Article 19 (38 U.S.C. § 371(c)(3)):

- a. ☐ is transmitted herewith.
- b. ☐ is not required as the amendments were made in the English language.
- c. ☒ has not been transmitted for reasons indicated at point 5(c) above.

7. ☒ A copy of the international examination report (PCT/IPEA/409)

- ☐ is transmitted herewith.
- ☒ is not required as the application was filed with the United States Receiving Office.

8. ☐ Annex(es) to the international preliminary examination report

- a. ☐ is/are transmitted herewith.
- b. ☐ is/are not required as the application was filed with the United States Receiving Office.

9. ☐ A translation of the annexes to the international preliminary examination report

- a. ☐ is transmitted herewith.
- b. ☐ is not required as the annexes are in the English language.

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10. ☒ An oath or declaration of the inventor (35 U.S.C. § 371(c)(4)) complying with 35 U.S.C. § 115
- a. ☐ was previously submitted by applicant on _____
Date
- b. ☐ is submitted herewith, and such oath or declaration
- i. ☐ is attached to the application.
- ii. ☐ identifies the application and any amendments under PCT Article 19 that were transmitted as stated in points 3(b) or 3(c) and 5(b); and states that they were reviewed by the inventor as required by 37 C.F.R. § 1.70.
- iii. ☒ will follow.

II. Other document(s) or information included:

11. ☒ An International Search Report (PCT/ISA/210) or Declaration under PCT Article 17(2)(a):
- a. ☒ is transmitted herewith.
- b. ☐ has been transmitted by the International Bureau.
Date of mailing (from form PCT/IB/308): _____
- c. ☐ is not required, as the application was searched by the United States International Searching Authority.
- d. ☐ will be transmitted promptly upon request.
- e. ☐ has been submitted by applicant on _____
Date
12. ☒ An Information Disclosure Statement under 37 C.F.R. §§ 1.97 and 1.98:
- a. ☒ is transmitted herewith.
Also transmitted herewith is/are:
☒ Form PTO-1449 (PTO/SB/08A and 08B).
☒ Copies of citations listed.
- b. ☐ will be transmitted within THREE MONTHS of the date of submission of requirements under 35 U.S.C. § 371(c).
- c. ☐ was previously submitted by applicant on _____
Date
13. ☐ An assignment document is transmitted herewith for recording.
A separate ☐ "COVER SHEET FOR ASSIGNMENT (DOCUMENT) ACCOMPANYING NEW PATENT APPLICATION" or ☐ FORM PTO 1595 is also attached.

14. ☒ Additional documents:

- a. ☒ Copy of request (PCT/RO/101)
- b. ☒ International Publication No. WO 00/26842
 - i. ☒ Specification, claims and drawing
 - ii. ☐ Front page only
- c. ☒ Preliminary amendment (37 C.F.R. § 1.121)
- d. ☒ Other

PCT/IB/332; PCT/IB/301; PCT/IB/304; PCT/ISA/220; PCT/ISA/210;

PCT/IB/308; PCT/IPEA/408

15. ☒ The above checked items are being transmitted

- a. ☒ before 30 months from any claimed priority date.
- b. ☐ after 30 months.

16. ☐ Certain requirements under 35 U.S.C. § 371 were previously submitted by the applicant on _____, namely:

AUTHORIZATION TO CHARGE ADDITIONAL FEES

WARNING: Accurately count claims, especially multiple dependant claims, to avoid unexpected high charges if extra claims are authorized.

NOTE: "A written request may be submitted in an application that is an authorization to treat any concurrent or future reply, requiring a petition for an extension of time under this paragraph for its timely submission, as incorporating a petition for extension of time for the appropriate length of time. An authorization to charge all required fees, fees under § 1.17, or all required extension of time fees will be treated as a constructive petition for an extension of time in any concurrent or future reply requiring a petition for an extension of time under this paragraph for its timely submission. Submission of the fee set forth in § 1.17(a) will also be treated as a constructive petition for an extension of time in any concurrent reply requiring a petition for an extension of time under this paragraph for its timely submission." 37 C.F.R. § 1.136(a)(3).

NOTE: "Amounts of twenty-five dollars or less will not be returned unless specifically requested within a reasonable time, nor will the payer be notified of such amounts; amounts over twenty-five dollars may be returned by check or, if requested, by credit to a deposit account." 37 C.F.R. § 1.26(a).

- ☒ The Commissioner is hereby authorized to charge the following additional fees that may be required by this paper and during the entire pendency of this application to Account No. 16-1350.

- ☒ 37 C.F.R. § 1.492(a)(1), (2), (3), and (4) (filing fees)

WARNING: Because failure to pay the national fee within 30 months without extension (37 C.F.R. § 1.495(b)(2)) results in abandonment of the application, it would be best to always check the above box.

(Transmittal Letter to the United States Elected Office (EO/US) [13-18]—page 7 of 8)

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☒ 37 C.F.R. § 1.492(b), (c) and (d) (presentation of extra claims)

NOTE: Because additional fees for excess or multiple dependent claims not paid on filing or on later presentation must only be paid or these claims cancelled by amendment prior to the expiration of the time period set for response by the PTO in any notice of fee deficiency (37 C.F.R. § 1.492(d)), it might be best not to authorize the PTO to charge additional claim fees, except possible when dealing with amendments after final action.

☒ 37 C.F.R. § 1.17 (application processing fees)

☐ 37 C.F.R. § 1.17(a)(1)-(5) (extension fees pursuant to § 1.136(a).

☐ 37 C.F.R. § 1.18 (issue fee at or before mailing of Notice of Allowance, pursuant to 37 C.F.R. § 1.311(b))

NOTE: Where an authorization to charge the issue fee to a deposit account has been filed before the mailing of a Notice of Allowance, the issue fee will be automatically charged to the deposit account at the time of mailing the notice of allowance. 37 C.F.R. § 1.311(b).

NOTE: 37 C.F.R. § 1.28(b) requires "Notification of any change in loss of entitlement to small entity status must be filed in the application . . . prior to paying, or at the time of paying . . . issue fee." From the wording of 37 C.F.R. § 1.28(b): (a) notification of change of status must be made even if the fee is paid as "other than a small entity" and (b) no notification is required if the change is to another small entity.

☒ 37 C.F.R. § 1.492(e) and (f) (surcharge fees for filing the declaration and/or filing an English translation of an International Application later than 30 months after the priority date).

PLEASE SEND ALL CORRESPONDENCE TO:

Reg. No.: 24,622

Tel. No.: (203) 259-1800

Customer No.: 2512


SIGNATURE OF PRACTITIONER

Clarence A. Green

(type or print name of practitioner)

PERMAN & GREEN, LLP

P.O. Address

425 Post Road, Fairfield, Connecticut 06430, USA

PLEASE SEND ALL CORRESPONDENCE TO:

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PERMAN & GREEN, LLP

425 Post Road, Fairfield, Connecticut 06430, USA

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Express Mail No.: EL627426323US

In re Application of: DUTTA et al

INTERNATIONAL APPLICATION NO.: PCT/ US99/25508

INTERNATIONAL FILING DATE: 10/29/99

U.S. SERIAL NUMBER:

TITLE: METHOD AND SYSTEM FOR SHIPPING/MAILING

ATTORNEY DOCKET NO.: 770P009584-US(PAR)

Box PCT

The Commissioner of Patents and Trademarks

Washington, D.C. 20231

PRELIMINARY AMENDMENT

Dear Sir:

Please amend the above-identified, patent application as follows:

IN THE SPECIFICATION

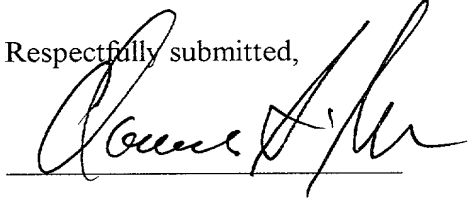
After the Title and before the first paragraph, please insert the following paragraph:

This application claims the benefit of the earlier filed International Application No. PCT/US99/25508, International Filing Date, 29 October 1999, which designated the United States of America, and which international application was published under PCT Article 21(2) in English as WO Publication No. WO 00/26842.

REMARKS

In accordance with 37 C.F.R. §1.121 (as amended on 11/7/2000) the specification insertion paragraph section above is shown on a separate page marked up to show all the insertions relative to the previous version of that section.

Respectfully submitted,



Clarence A. Green Reg. No. 24,622
PERMAN & GREEN, LLP
425 Post Road, Fairfield, CT 06430
(203) 259-1800
Customer No.: 2512



Date

201220 06402050

Application entitled: METHOD AND SYSTEM FOR SHIPPING/MAILING

Marked Up Specification Added Paragraph:

This application claims the benefit of the earlier filed International Application No. PCT/US99/25508, International Filing Date, 29 October 1999, which designated the United States of America, and which international application was published under PCT Article 21(2) in English as WO Publication No. WO 00/26842.

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15/PRTS

09/830498

JC18 Rec'd PCT/PTO 2 7 APR 2001

WO 00/26842

PCT/US99/25508

Description

METHOD AND SYSTEM FOR SHIPPING/MAILING

Technical Field

The invention relates to shipping/mailing techniques, more particularly utilizing distributive
5 computerized technology.

Background of the Invention

Many offices/organizations process large numbers of mail pieces or parcels and utilize different shipping or mailing carriers such as the United States
10 Postal Service (USPS), United Parcel Service (UPS), Federal Express (FedEx), RPS and DHL, for example. For each mail piece, the carriers require shipping/mailing information including the delivery address and, typically, further instructions such as the class of
15 service, for example.

The required information may be supplied by manual entry, e.g. using the carrier's proprietary software. Such entry tends to be inefficient and error
20 prone.

Summary of the Invention

The present invention aims at more efficient and error-free processing of shipping/mailing information. Measures are taken for reducing manual work
25 and validating the information, including utilization of optical scanning, character recognition (OCR) and bar codes, and reference to standard address databases in a distributive-processing technique, e.g. client-server or peer-to-peer.

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In addition to the addressee, a user of the technique may specify the carrier and/or a class of service to be used for delivery. Alternatively, choice of a delivery option can be provided automatically, based on predefined rules. At a user site, delivery information may be entered by typing, by importing from a personal or public database/list, or by scanning by an optical character recognizer (OCR), for example.

An entered delivery address can be checked against the USPS Address Matching System (AMS) database to verify its validity. If the address fails to check out, possible valid addresses can be offered automatically for the user's consideration. Automatically also, addresses can be standardized, e.g. as to font and format, and for readability. Additional data may be appended, e.g. an internal billing code and/or a tracking ID.

Shipping/mailing data as provided or generated can be printed onto a label or other suitable medium, readable to a human and/or in an encoded form, e.g. a 2-dimensional bar code as based on a 2-D symbol standard such as PDF-417 or Data Matrix, for example. With the label affixed, e.g. detachably, a parcel or mail piece is ready for forwarding to a shipping/mailing room/location.

Preferably, with the label including a bar code, shipping/mailing information can be scanned for automated processing at the shipping location, to print the selected shipper's actual shipping label and postage if required. To facilitate tracking, the shipping/mailing information may be uploaded to the shipper, e.g. to UPS Online.

Brief Description of the Drawing

Fig. 1 is a diagram illustrating mail piece origination.

Fig. 2 is a diagram illustrating mail piece processing at a shipping/mailing center.

Fig. 3 is an example of a computer opening/main screen view in mail piece origination.

5 Fig. 4 is a diagram of a distributive network as can be used in mail piece origination, including address validation and standardization.

Fig. 5 is a schematic for shipping/mailing address validation and standardization.

10 Fig. 6 is a state diagram for automated shipping/mailing address standardization.

Fig. 7 is a data flow diagram for automated address printing.

15 Fig. 8 is a state diagram for automated label generation.

Fig. 9 is a state diagram for automated address database importing.

Fig. 10 is a state diagram for automated address standardization and validation.

20 Figs. 10 and 11 are state diagrams for revenue protection.

Fig. 12 is a state diagram for automated feature authorization.

25 Fig. 13 is a state diagram for automated safeguarding against unauthorized access to address standardization/validation.

Fig. 14 is a state diagrams for automated license registration.

30 Fig. 15 is a state diagram for automated seat feature enforcement.

Detailed Description

Features as described herein with reference to the drawing have been implemented in an exemplary system
35 here designated as Addressing and Bar Code (ABC)

Link/Host. The features are not required all to be included in a single embodiment of the invention, but can be used individually or in any suitable combination within various preferred embodiments. Conveniently in
5 implementation, a suitable programming language is used, e.g. C++.

Figs. 1 and 2 illustrate over-all processing in shipping/mailing, e.g. at a large office facility. Specifically, Fig. 1 illustrates origination or
10 generation of mail pieces at an enterprise network 100, and Fig. 2 their processing at a shipping/mailing center 103 where the mail pieces are further processed to shipping carriers such as the Post Office, UPS, RPS, FedEx and DHL, for example.

Fig. 1 shows a label 105 comprising a bar code 110, generated at a enterprise network site 100 for processing a mail piece 115. A user at a terminal 101 of the site 100 enters shipping information for the mail
15 piece 115, such as shipping destination, originator identification, carrier, shipping class and declared value of the contents. The shipping information is encrypted and included in the bar code 110 on the label 105. The bar code 110 may be based on the PDF-417, Data
20 Matrix, or other 2D-symbol standard. The label 105, which includes the entered shipping information and the bar code 110, is printed on a network or local printer of the site 100, and placed on the mail piece 115 for forwarding to the center 103 of Fig. 2 for
25 shipping/mailing.

Fig. 2 shows the bar code 110 for the mail piece 115 being read using a bar code scanner 120 connected to a terminal 125 at the shipping/mailing center. The terminal 125 has suitable bar code
30 recognition and decryption software for extraction and decryption of the shipping information from the bar code
35

110. The terminal 125 converts the shipping information into the appropriate format of the carrier selected for the mail piece 115. The converted information is uploaded to the shipping software of the selected carrier, e.g. UPS Online, and the terminal 125 instructs a thermal printer 130 to print a shipping label 135 for use by the carrier. With the shipping label 135 affixed, the mail piece 115 is ready for processing by the selected carrier.

Fig. 3 shows a graphical user interface (GUI) or screen display for processing at the terminal 101, with shipping by the USPS being shown as an example. The display resembles typical text processor screens, including a row 151 of menu buttons, a row 152 of icons, a shipping class display 153 as selected by one of the click tabs 154, here for the USPS, an address text display 155, a special services selection display 156, an originating department information display 157, a multiple-label button 158, a print button 159, an address book access button 160, a "remove" button 161 and a shipping directions button 162. Functions are actuated and controlled by typing, and by familiar clicking on buttons, tabs and icons.

It has been recognized that the use of conventional bar codes for the labels generated at network 100 for processing at a shipping/mailing center 103 may be susceptible to fraudulent circumvention. For example, a conventional bar code on label 105 might be readable by an unauthorized, conventional bar code reader. The use of unauthorized systems and components may undermine the integrity and performance of the shipping process.

As a countermeasure, the shipping information for the mail piece 115 is encrypted before it is used to generate the bar code 110. The terminal 125 includes a

decryption algorithm for the data read by the bar code reader 120 from the bar code 110. Unauthorized systems, without the decryption algorithm will be unable to process the encrypted shipping information from the bar code 110.

Further to deter the use of unauthorized equipment at shipping/mailing room center 103, the shipping address and information for a mail piece can be shuffled in accordance with a predetermined shuffling algorithm prior to encryption. For example, the order of first and last names of a recipient may be reversed prior to encryption. At the mailroom terminal 125, a rearrangement algorithm will then undo the shuffling. Shuffling and rearrangement algorithms can be updated periodically to prevent their discovery upon inspection of the shuffled shipping information.

While use of the scanner 120 eliminates the likelihood for error in transferring the shipping information onto the shipping label 135, without further validation there remains a concern with error at the source, e.g. a user at the terminal 101 entering erroneous shipping information. A resulting invalid shipping address may remain undetected until the carrier fails to deliver the mail piece 115. This concern can be minimized by measures as follows:

Fig. 4 shows a user network 100 for use with Windows NT, featuring address validation using a database provided by the USPS, with validation being facilitated by standardizing addresses as to their format. The USPS address database service, known as its Address Matching System (AMS), includes on a CD-ROM all valid U.S. addresses in a standardized format. Updated versions are provided periodically under a license agreement.

The network 100 comprises a network server 200
35 and a network hub 205, providing network services to

client terminals 210, 215, 220, and 225. The network 100 may be a packet-switched network for transporting information in accordance with the standard transmission control protocol/internet protocol (TCP/IP). Remote
5 access is provided for terminal 225 by a dial-up/Internet connection through the modem 230.

Windows operating systems, e.g. Windows 95, 98 or NT are installed at the server 200 and terminals 210, 215, 220 and 225 for communicating amongst one another.
10 Further installed at the terminals 215, 220 and 225 is software here designated as ABC Link and, at the terminal 210, software designated as ABC Host. The latter includes an AMS capability for making use of the AMS CD in a CD-ROM drive 235. A hardware key 240 is connected
15 at a communication port of the terminal 210, representing a contractual safeguarding element.

For the host terminal 210, use of Windows NT is advantageous in that it provides a launch service that keeps ABC Host running even in the absence of any current
20 demand for shipping/mailing address processing. Thus, there will be no need for start-up when demand arises. For operating systems that do not provide such a service, e.g. Windows 95 and 98, a launcher application can be provided in the host terminal 210 for the same purpose.
25 The launcher application can be included automatically at the time ABC Host is installed at the terminal 210.

Installation and other auxiliary software for Link/Host can be stored at the network server 200 or any of the client terminals 210, 215, 220, or 225. Instead
30 of at one of the terminals, such as the terminal 210, ABC Host can be installed at the server 200. Conversely, while Fig. 4 shows a client-server configuration, ABC Link/Host can be implemented in the absence of the network server 200, in a peer-to-peer configuration.

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One and the same terminal may include ABC Host as well as ABC Link, e.g. the remote client terminal 225 in Fig. 4, with a corresponding additional subscription to ABC Host. In this case, the ABC Link at the terminal
5 225 may use either its own ABC Host or the one provided via the network

Fig. 5 illustrates shipping/mailing address validation/standardization in ABC Link/Host prior to use in labeling. Shown are two network client terminals 215
10 and 220, and three Internet client terminals 225-227, all in communication with the host terminal 210. From one of the client terminals, 215, potentially inaccurate or "dirty" shipping/mailing addresses are assembled in a marshaling list 500 for checking against AMS data 510
15 from the CD ROM 235. The host 210 returns proposed "clean" addresses to the marshaling list 500 for accessing from the client 215.

Without precluding processing of a single shipping/mailing address individually, the marshaling
20 list 500 facilitates processing of addresses in batches. This feature can serve to minimize the number of round-trip communications between the client terminal 215 and the host 210, thereby enhancing processing efficiency.

Fig. 6 illustrates address standardization
25 processing, either to the successful display of an address or to failure. From a client terminal 215, a pre-existing address 601 or a newly entered address 602 can be entered into a marshaling list 603 for submission 605 to the standardizing functionality 606 of the host
30 210. Submission also activates preparation of a license interface 604. Standardization 606 is contingent on verifications 607 and 608 that the hardware key 240 remains connected at the host 210 and the requirements of the license interface are met. If so, the submitted
35 address list is un-marshaled, 609, the submitted

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addresses are copied, 610, for AMS processing 611, a custom-address-marshaling list is prepared for the standardized addresses and is attached to the submitted address list, 612 and 613. The resulting list is un-marshaled, 614, for display.

Fig. 7 illustrates address data flow to printing. Addresses can be created or selected at a module 701, assembled as Array_Addresses 702, copied as Array_AddressSearch 703, AMS-processed, 704, e.g. as shown in Fig. 6, and copied as Array_AddressCorrected 705. As AMS-processing may result in several proposed corrected addresses for one and the same original new address, display at 706 will prompt the user to select the one intended, resulting in Array_AddressSelected 707 and a key index with respect to Array_AddressCorrected 705. Copying of the finally selected addresses yields Array_AddressChosen 708 to which business rules can be applied, e.g. generation of multiples to yield Array_AddressPrint. Final printing can be subject to printing rules, e.g. how many addresses to print per sheet of paper in generating labels.

Fig. 8 illustrates address processing for generating a label. An address 801 can be obtained from the clipboard 802 where it was placed by a different application 803. An address from the clipboard data can be parsed, 804, with different parsing rules 805-809 being applied depending on the number of lines of the address and on the presence/absence of numerals and special characters, for example. An address 801 can be saved in a database 810, preferably after ABC Host services 811 have produced the address as standardized, 812. A preferred carrier and class of service, 813, can be selected for an address 801 or standardized address 812. Printing, 814, can include a 2-dimensional bar code meeting the PDT417 standard, for example.

Fig. 9 illustrates importing of addresses, activated from a menu 901 and involving browsing, e.g. of a text file 902, MVP import 903 or database 904. Options 905 include standardizing 906, creating a category 907 and including in a database 908. A standarzed address 906 can be selected, 910, for inclusion in the category 907.

Fig. 10 shows workstations 215, 220 and 225 with respective licenses 216, 221 and 226. System communications 1001 result in license registration at the server application 1002 which includes a license callback capability for periodic checking on workstations 215, 220 and 225 as to their status under the license. The server application 1002 can check licenses for functionality 1003, and the license can be destroyed, 1004, in case of lack of authorization. The license is destroyed also in case a license callback results in failure, in which case the number of available seats or licenses can be incremented, 1005, at a dynamic license table 1006. A time license rotator 1007 is in communication with the dynamic license table 1005, the server application 1002 and the license callback 1002.

Fig. 11 shows the host 210 starting the clock 1101 for periodically changing the license key 1102. Each time a new license key is chosen, the most recent two keys are saved in a history 1003. Issuance of a new key initiates callback at the callback queuing table 1104 that is informed by the total number of seats 1105 that is also referred to by the host 210 in ending an application if service is requested at too many terminals as compared with the number of licenses. The host 210 further refers to the authorization number 1106 and hardware dongle 1107, which both depend on seat options 1008. The ABC license 1009 is established when the application starts. Before an address standardization

1010 can be effected, the key comparison 1011 has to be successful.

Fig. 12 illustrates feature or functionality authorization at the host 210 for a client 215 whose serial number is obtained from a dongle 1201. An authorization code is read, 1202. An encryption engine 1203 is called on for feature decryption, yielding options 1204. The options 1204 are concatenated with internal data 1205 and encrypted to form an encrypted electronic authorization signature 1206. Authorization is established if, at 1207, the authorization code and the encrypted electronic authorization signature are in agreement.

Fig. 13 illustrates processing of a request for address validation and standardization from a terminal 215. Passed in with a standardization request 1301 are a new address list 1302 and the ABC license interface 1303. The ABC host 210 promotes the base interface to the ABC license interface 1304 and ascertains that the request comes with a current authentication "cookie", or at least by one of the most recent two previous cookies. If so, the request for standardizing is acted on, 1306, by actuating AMS 235.

Fig. 14 illustrates license registration for ensuring that the number of client terminals using the system remains limited at all times by the number of licenses. At the terminal 215, the ABC license 1401 is created. Upon connection to the host 210, the license is registered, and a comparison 211 between the total number 212 of seats and the available or free number 213 of seats. If no seats are available, 214, the requesting application at the terminal 215 ends. If a seat is available, 215, from callback update table 216 the number of available seats 217 is decremented and a cookie 218 is

issued for later, periodic verification that the terminal 215 continues to be in an authorized state.

Fig. 15 illustrates continuing seat feature enforcement. Periodically, e.g. every 2 minutes per timer 1501, a new cookie is generated. The current cookie 1502 is saved, as are the two immediately preceding values, establishing a cookie history 1503. Where the callback table 1504 is updated successfully, the new cookie is forwarded to the corresponding active terminal; otherwise, 1505, the corresponding license is canceled and the number of available seats is incremented, 1506.

Claims

1 1. A method for shipping/mailing articles
2 comprising the steps of:
3 generating shipping/mailing data for one of the
4 articles at one of a plurality of client terminals which
5 are linked to a host terminal, wherein generating
6 comprises information transfer between the client
7 terminal and the host terminal; and
8 producing the shipping/mailing data for generating a
9 shipper's label.

1 2. The method of claim 1, wherein producing
2 comprises printing the shipping/mailing data.

1 3. The method of claim 1, wherein producing
2 comprises encoding the shipping/mailing data in a 2-
3 dimensional bar code.

1 4. The method of claim 1, wherein producing
2 comprises encrypting the data.

1 5. The method of claim 1, wherein producing
2 comprises shuffling the data.

1 6. The method of claim 1, wherein generating the
2 shipping/mailing data comprises referring to an
3 electronic address book.

1 7. The method of claim 1, wherein generating the
2 shipping/mailing data comprises pasting from a clipboard.

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1 8. The method of claim 1, wherein generating the
2 shipping/mailling data comprises selecting a carrier.

1 9. The method of claim 1, wherein generating the
2 shipping/mailling data comprises selecting a class of
3 service.

1 10. The method of claim claim 1, wherein generating
2 the shipping/mailling data comprises referring to a
3 database of valid addresses for validation.

1 11. The method of claim claim 10, wherein referring
2 to the database of valid addresses yields a proposed
3 address.

1 12. The method of claim 1, wherein generating the
2 shipping/mailling data comprises address standardizing.

1 13. The method of claim 12, wherein standardizing
2 takes into account how many lines an address has.

1 14. The method of claim 10, wherein referring to a
2 database is effected for a batch of addresses.

1 15. The method of claim 1, wherein an application
2 for servicing the client terminals keeps running even in
3 the absence of a request from a client terminal.

1 16. The method of claim 15, wherein the host
2 terminal has a launcher application for keeping the
3 application running.

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1 17. The method of claim 1, further comprising the
2 host terminal referring to a hardware key for enforcing
3 license compliance.

1 18. The method of claim 17, wherein license
2 compliance comprises compliance with a maximum number of
3 client terminals being serviced by the host terminal.

1 19. The method of claim 17, further comprising the
2 host terminal making callbacks to the client terminal.

1 20. The method of claim 17, further comprising the
2 host terminal allowing a different terminal to fill in
3 for a disconnected terminal

1 21. A medium comprising computer-interpretable
2 instructions for effecting a method for shipping/mailing
3 articles, comprising instructions for:
4 generating shipping/mailing data for one of the
5 articles at one of a plurality of client terminals which
6 are linked to a host terminal, wherein generating
7 comprises information transfer between the client
8 terminal and the host terminal; and
9 producing the shipping/mailing data for generating a
10 shipper's label.

1 22. The medium of claim 21, including instructions
2 for printing the shipping/mailing data.

1 23. The medium of claim 21, including instructions
2 for encoding the shipping/mailing data in a 2-dimensional
3 bar code.

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1 33. The medium of claim 32, wherein standardizing
2 takes into account how many lines an address has.

1 34. The medium of claim 30, wherein referring to a
2 database is for a batch of addresses.

1 35. The medium of claim 21, including instructions
2 for keeping an application for servicing the client
3 running even in the absence of a request from a client
4 terminal.

1 36. The medium of claim 35, including instructions
2 for loading a launcher application.

1 37. The medium of claim 21, including instructions
2 for the host terminal to refer to a hardware key for
3 enforcing license compliance.

1 38. The medium of claim 37, wherein license
2 compliance comprises compliance with a maximum number of
3 client terminals being serviced by the host terminal.

1 39. The medium of claim 37, including instructions
2 for the host terminal to make callbacks to the client
3 terminals.

1 40. The medium of claim 37, including instructions
2 for the host terminal to allow a different terminal to
3 fill in for a disconnected terminal.

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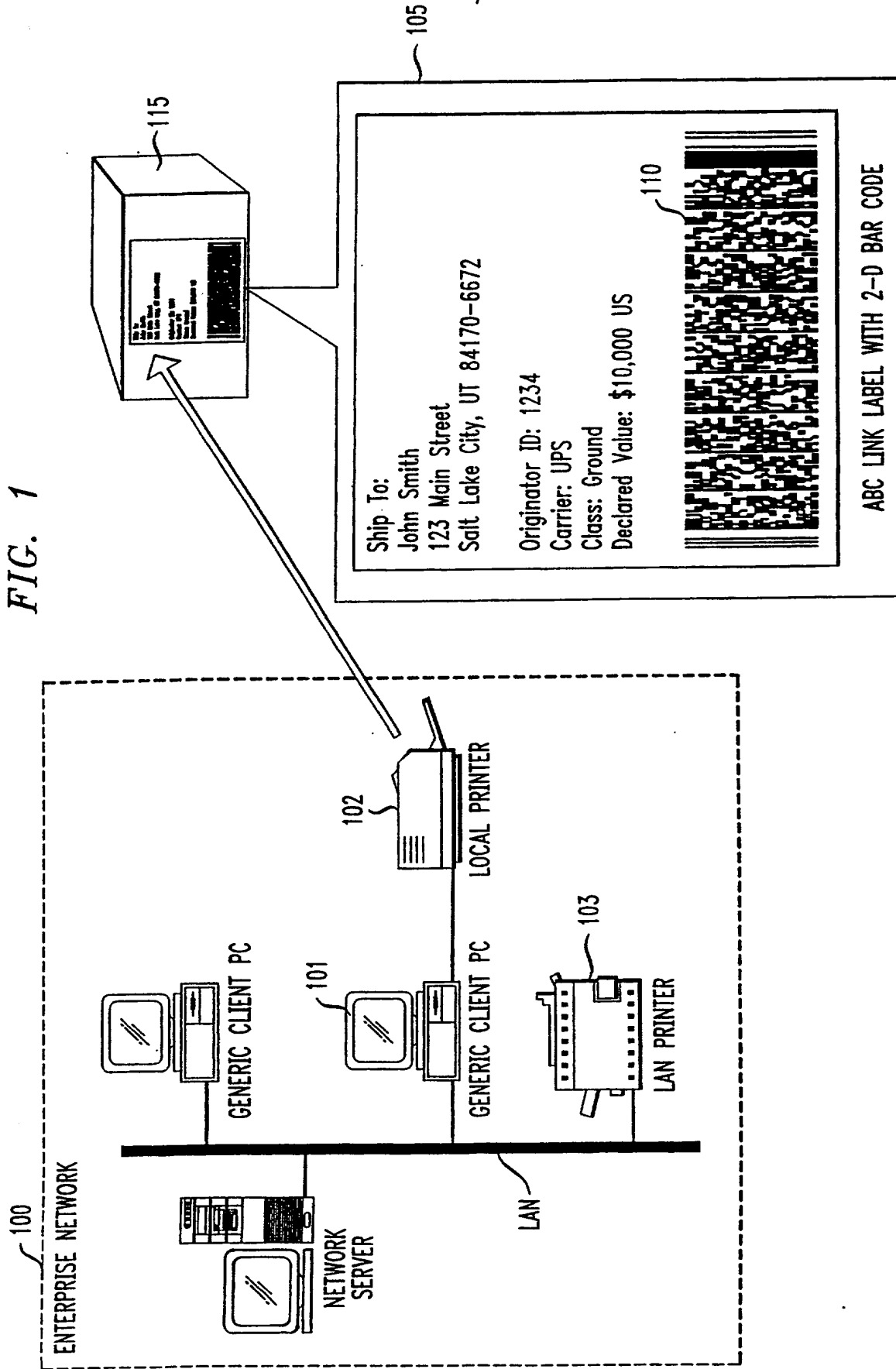
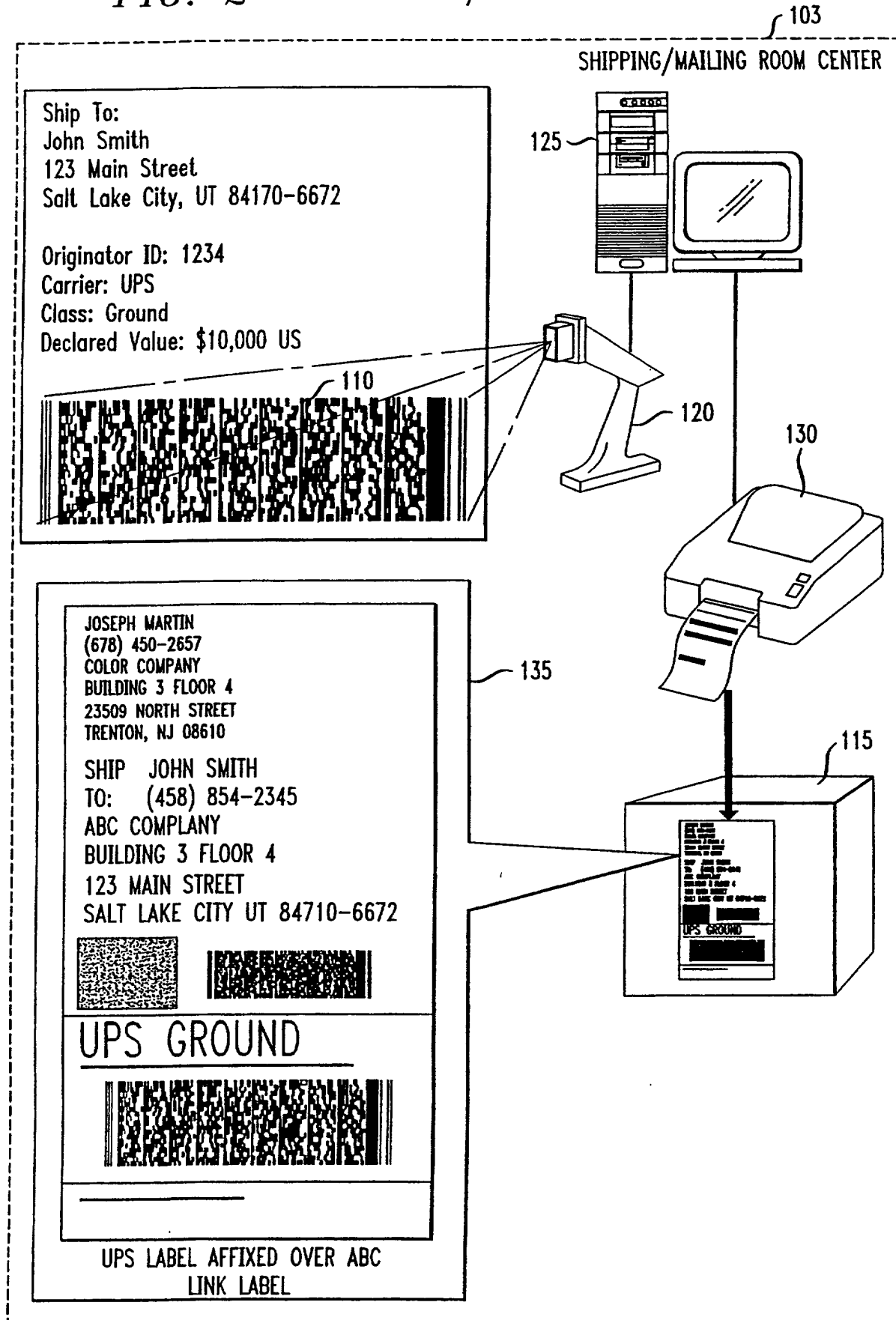


FIG. 2

2/15



3/15 157

FIG. 3

ABClink - v1.3 Beta Release for Field Test Purposes Only

File Edit View Wizards Tools Help

151 152 153 154 155 156 157 158 159 160 161

USPS Class

Express - Post Office to Address

Express - Post Office to Post Office

First Class

Priority

Standard B - Parcel

Special Services

None ☐ Return Receipt

Registered ☐

Certified ☐

Insurance ☐

Print List: 1 of 1

James Waltern

ASCOM HASLER MAILING SYSTEMS INC.

19 FOREST PKWY

SHELTON, CT 06484-6140

Print

New Address

Address Book

Remove

Remove All

Remove Duplicates

Include Shipping Directions

Departmental Information

☒ Enable

Department Engineering

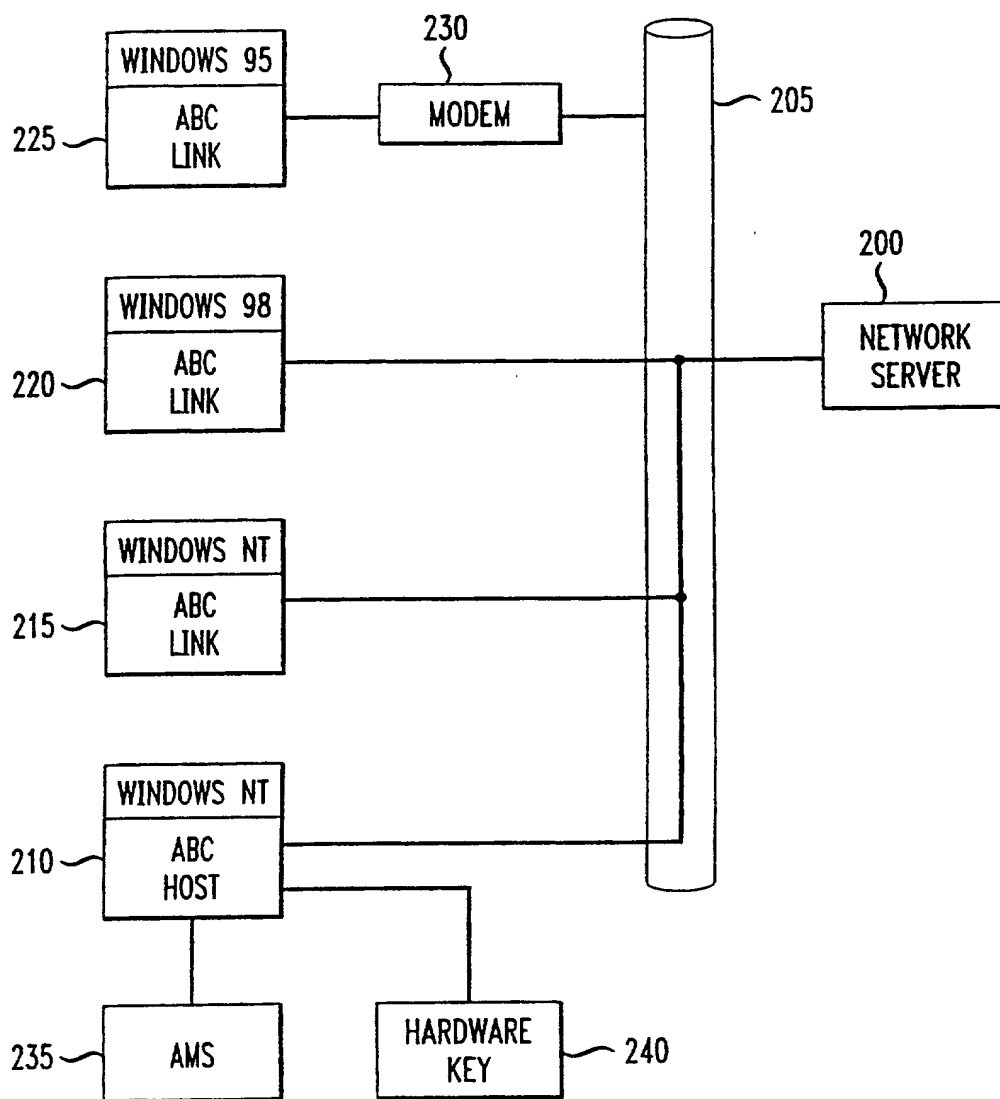
User JMattem

☒ Use Multiple Labels

NUM

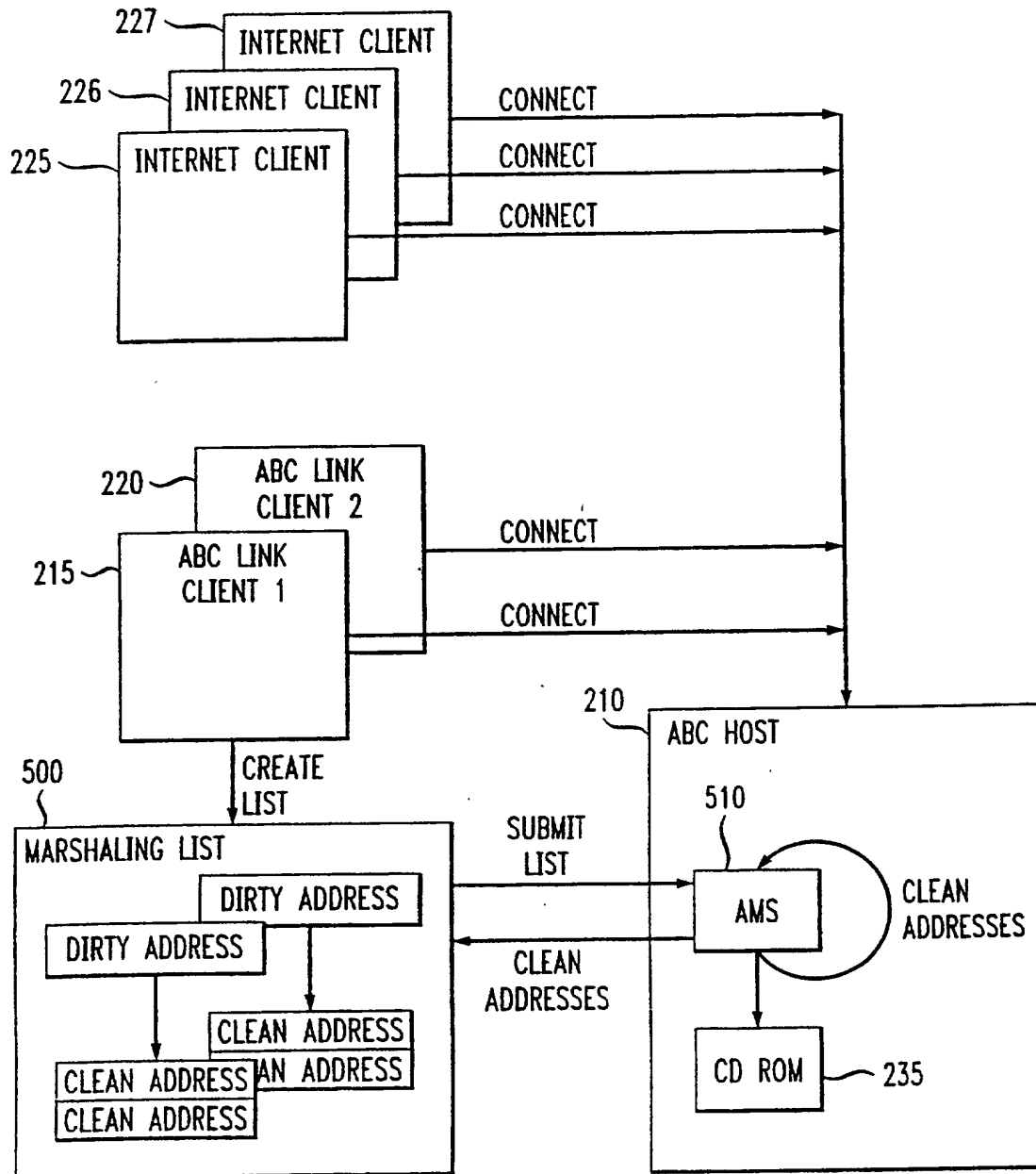
For Help: press F1

FIG. 4



5/15

FIG. 5



6/15

FIG. 6
ADDRESS STANDARDIZATION

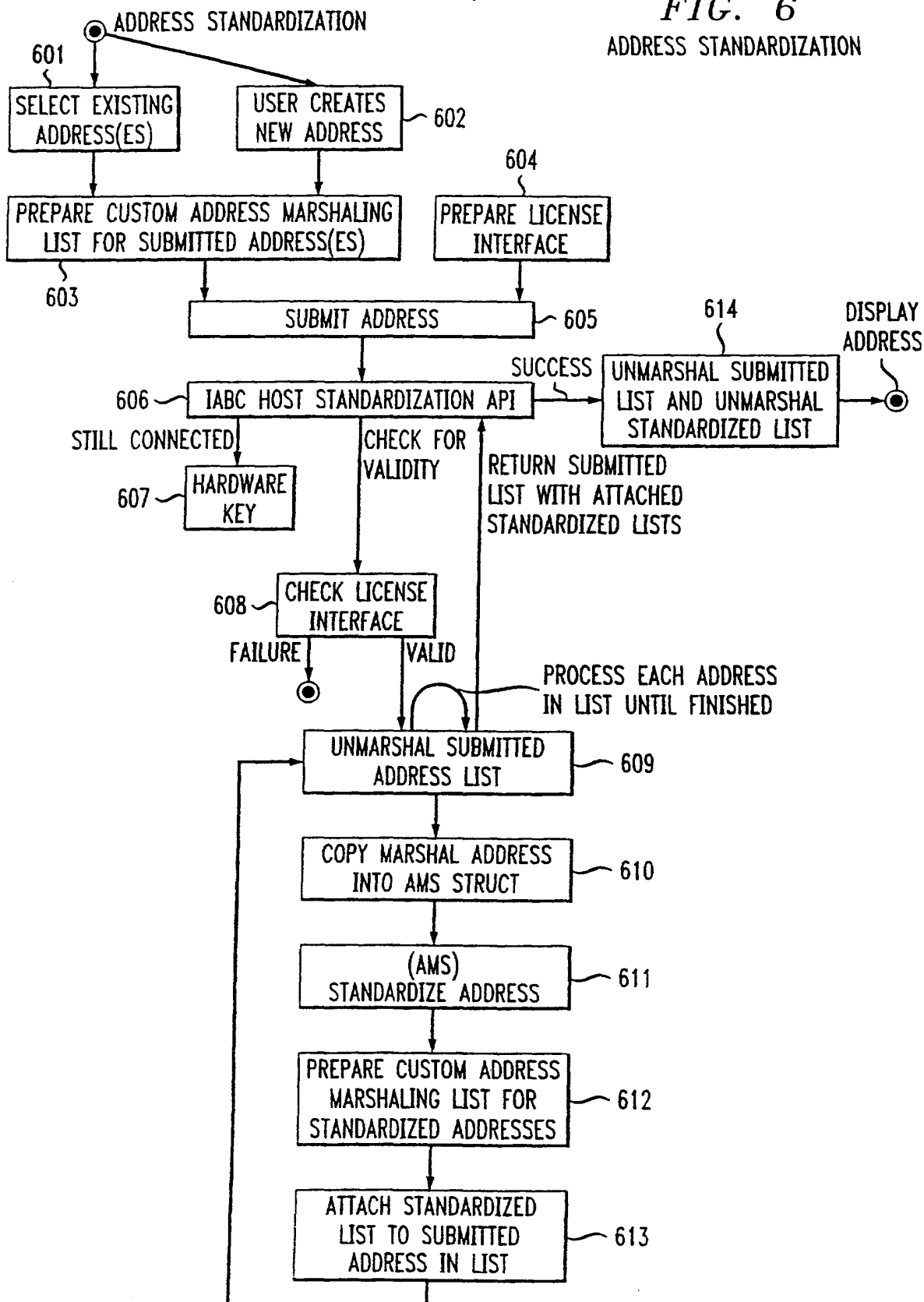
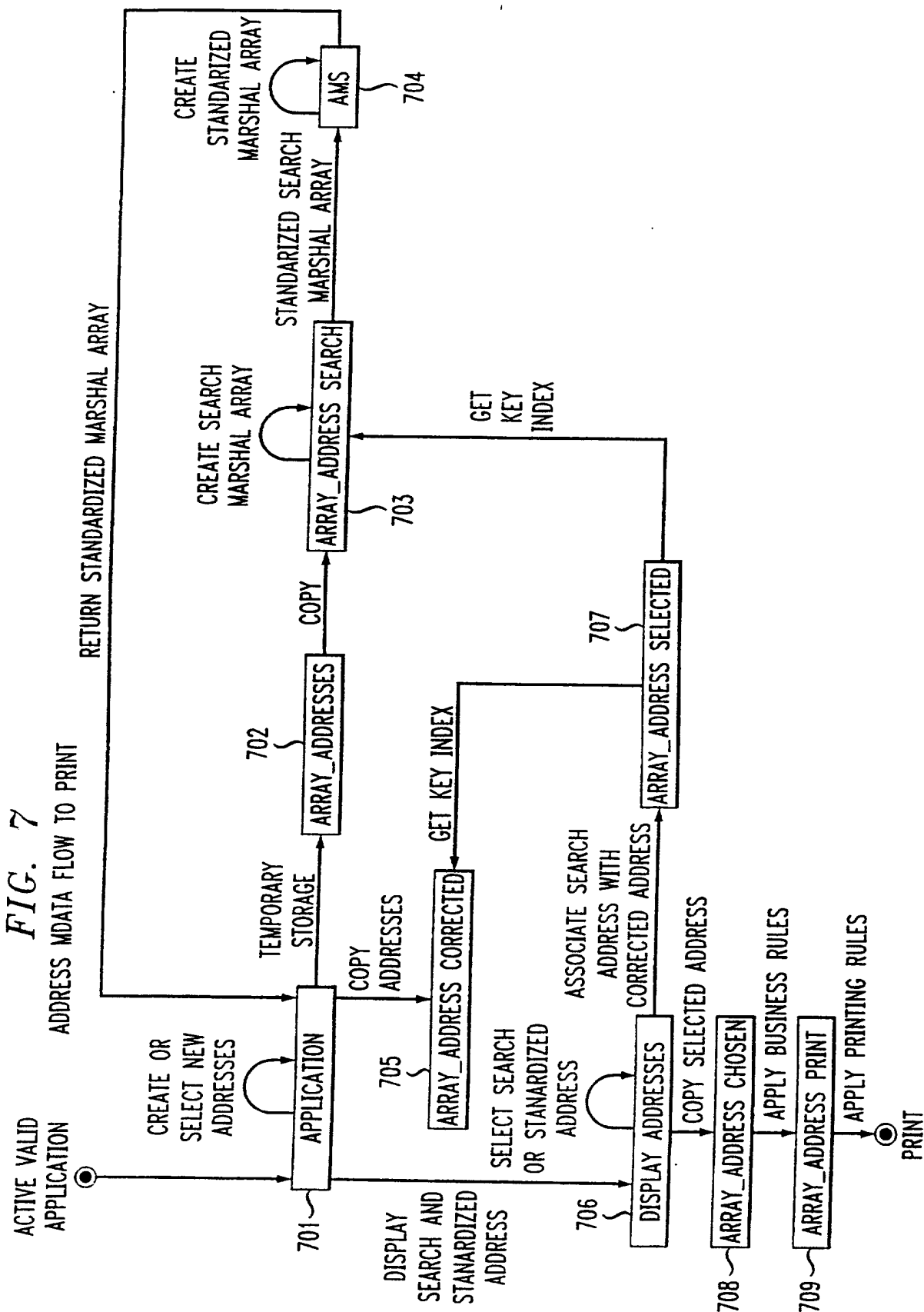


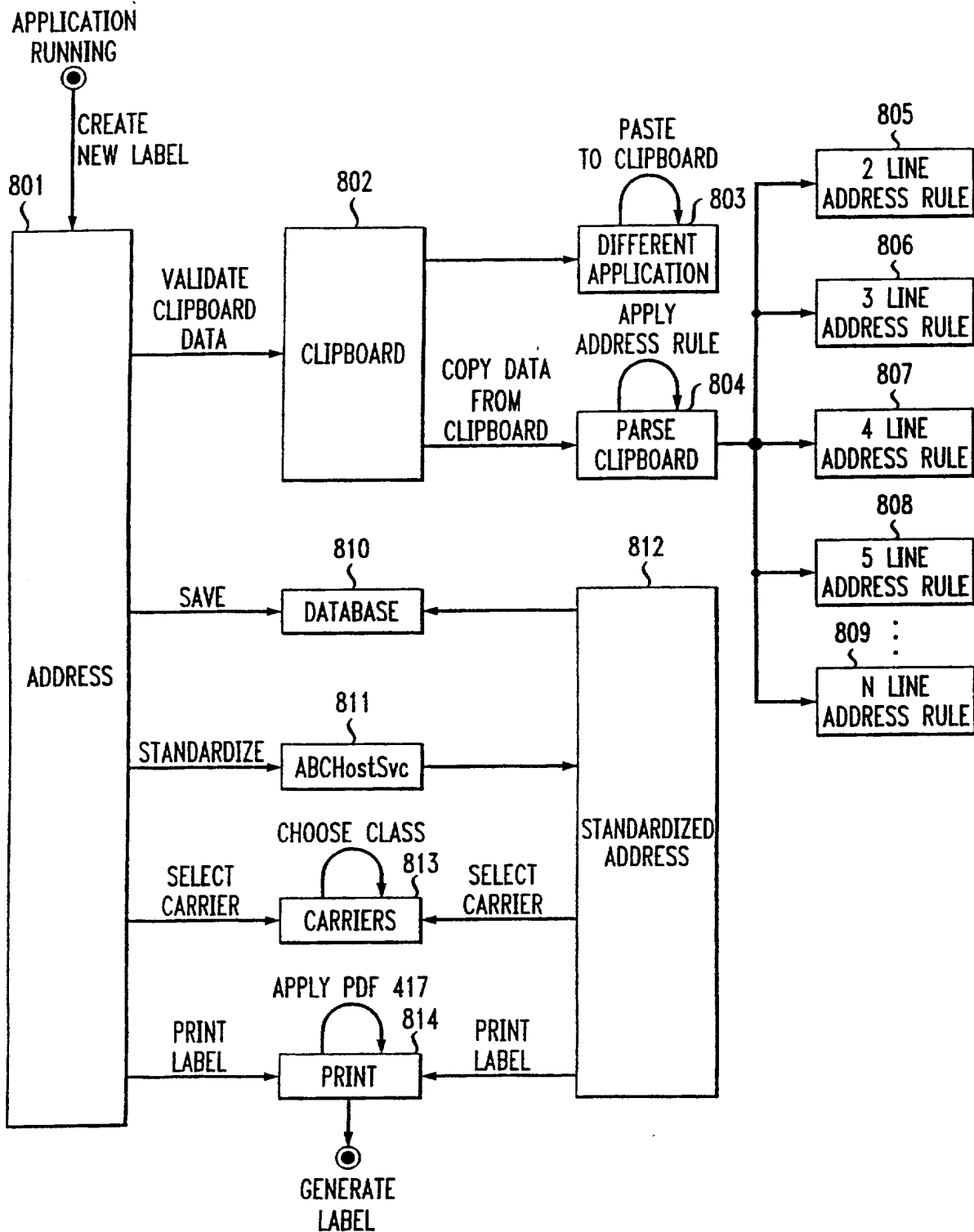
FIG. 7



8/15

FIG. 8

NEW ADDRESS



9/15

FIG. 9

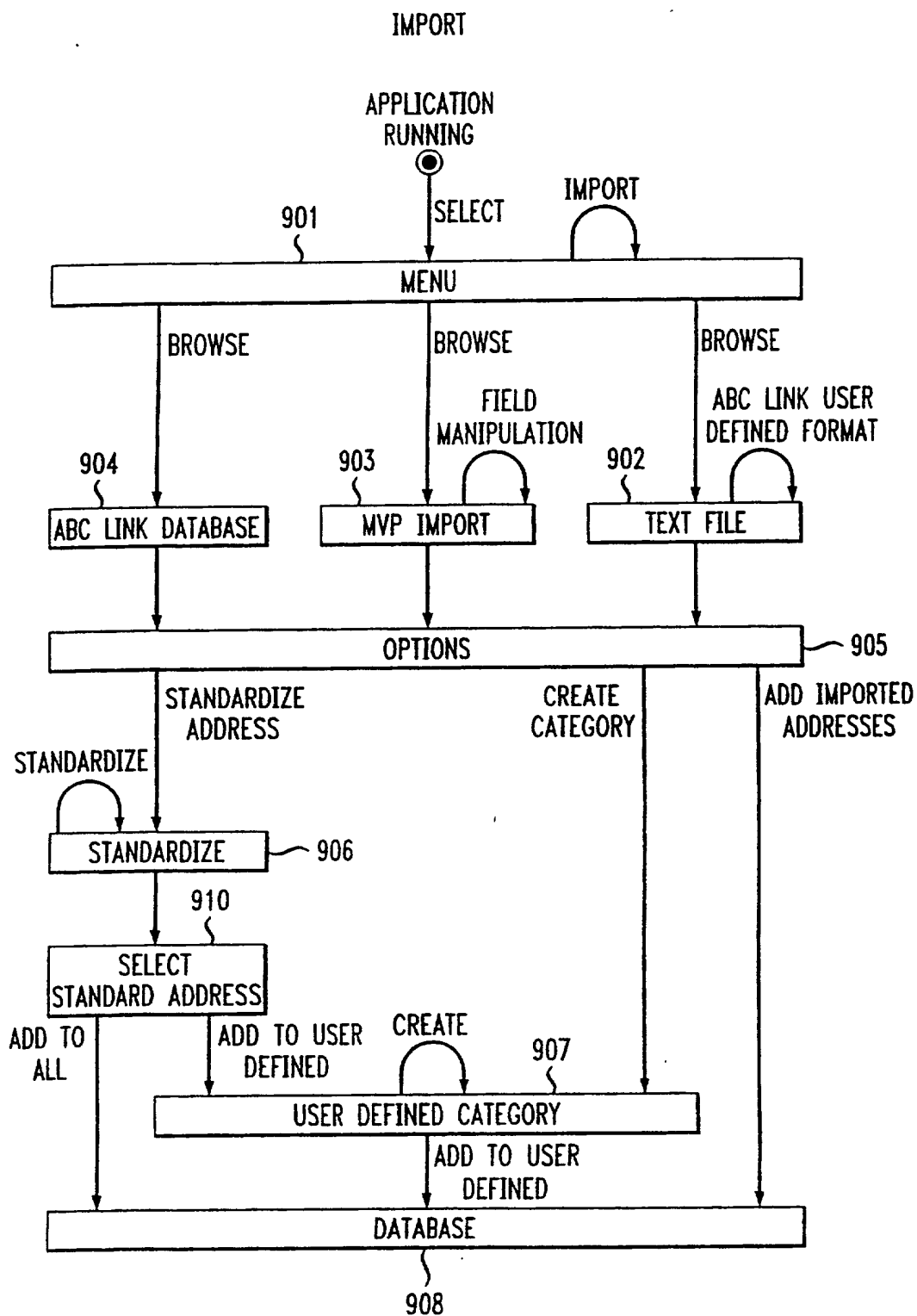


FIG. 10
REVENUE PROTECTION

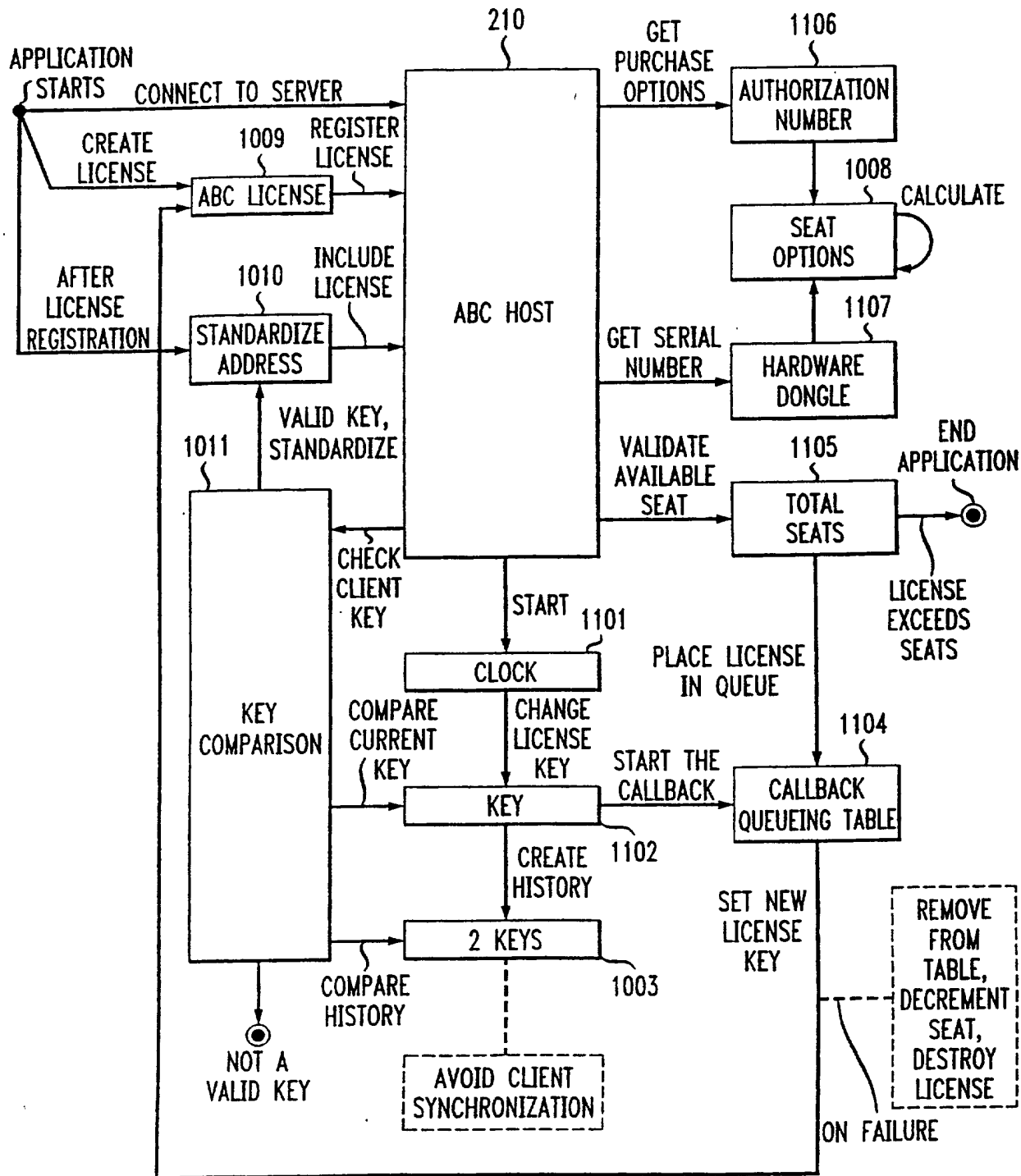
```
graph TD
    subgraph 216 [216]
        L1[License 1]
    end
    subgraph 221 [221]
        L2[License 2]
    end
    subgraph 226 [226]
        Ln[License n]
    end
    subgraph 220 [220]
        W1[Workstation 1]
        W2[Workstation 2]
        Wn[Workstation n]
    end
    subgraph 1001 [1001]
        SC[SYSTEM COMMUNICATION]
    end
    subgraph 1002 [1002]
        SA[SERVER APPLICATION]
    end
    subgraph 1003 [1003]
        F[FUNCTIONALITY]
    end
    subgraph 1004 [1004]
        DL[DESTROY LICENSE]
    end
    subgraph 1005 [1005]
        DLT[DYNAMIC LICENSE TABLE]
    end
    subgraph 1006 [1006]
        N[NUMBER OF AVAILABLE SEATS]
    end
    subgraph 1007 [1007]
        TLR[TIMED LICENSE ROTATOR]
    end
    subgraph 1008 [1008]
        LKV[LICENSE KEY VALUE]
    end

    L1 -- "1: CREATE LICENSE" --> W1
    W1 -- "2: CONNECT TO SERVER APPLICATION" --> SC
    SC -- "3: REGISTER LICENSE" --> SA
    SA -- "4: PLACE LICENSE IN QUEUING TABLE" --> DLT
    DLT -- "5: DECREMENT AVAILABLE SEATS" --> N
    N -- "6: TIMER, CHANGE LICENSES" --> TLR
    TLR -- "7: NEW LICENSE KEY" --> SA
    SA -- "8: GET LICENSES FROM TABLE" --> F
    F -- "9: CHANGE KEYS" --> TLR
    TLR -- "10: SET KEY CHANGE" --> SA
    SA -- "11: SUCCESS/FAILURE" --> W1
    W1 -- "12: FAILURE" --> SA
    SA -- "13: REMOVE LICENSE" --> DLT
    DLT -- "14: INCREMENT NUMBER OF SEATS" --> N
    N -- "15: FAILURE" --> DL
    DL -- "16: USE SERVER FUNCTIONALITY, PASS LICENSE" --> L1
    LKV -- "17: API CALL" --> F
    F -- "18: GET LICENSE" --> SA
    SA -- "19: SUCCESS" --> F
    F -- "20: FAILURE" --> DL
```

11/15

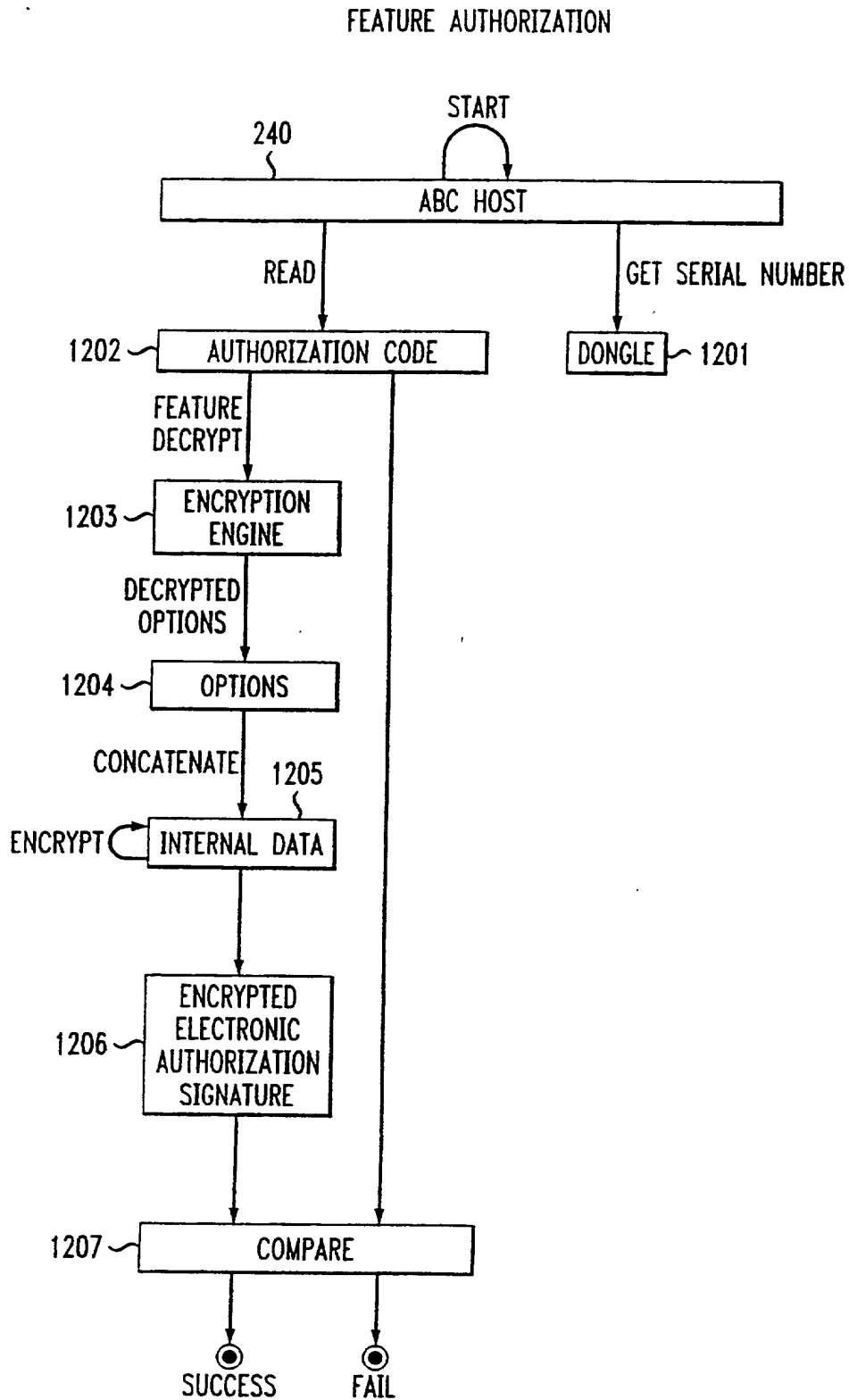
FIG. 11

REVENUE PROTECTION



12/15

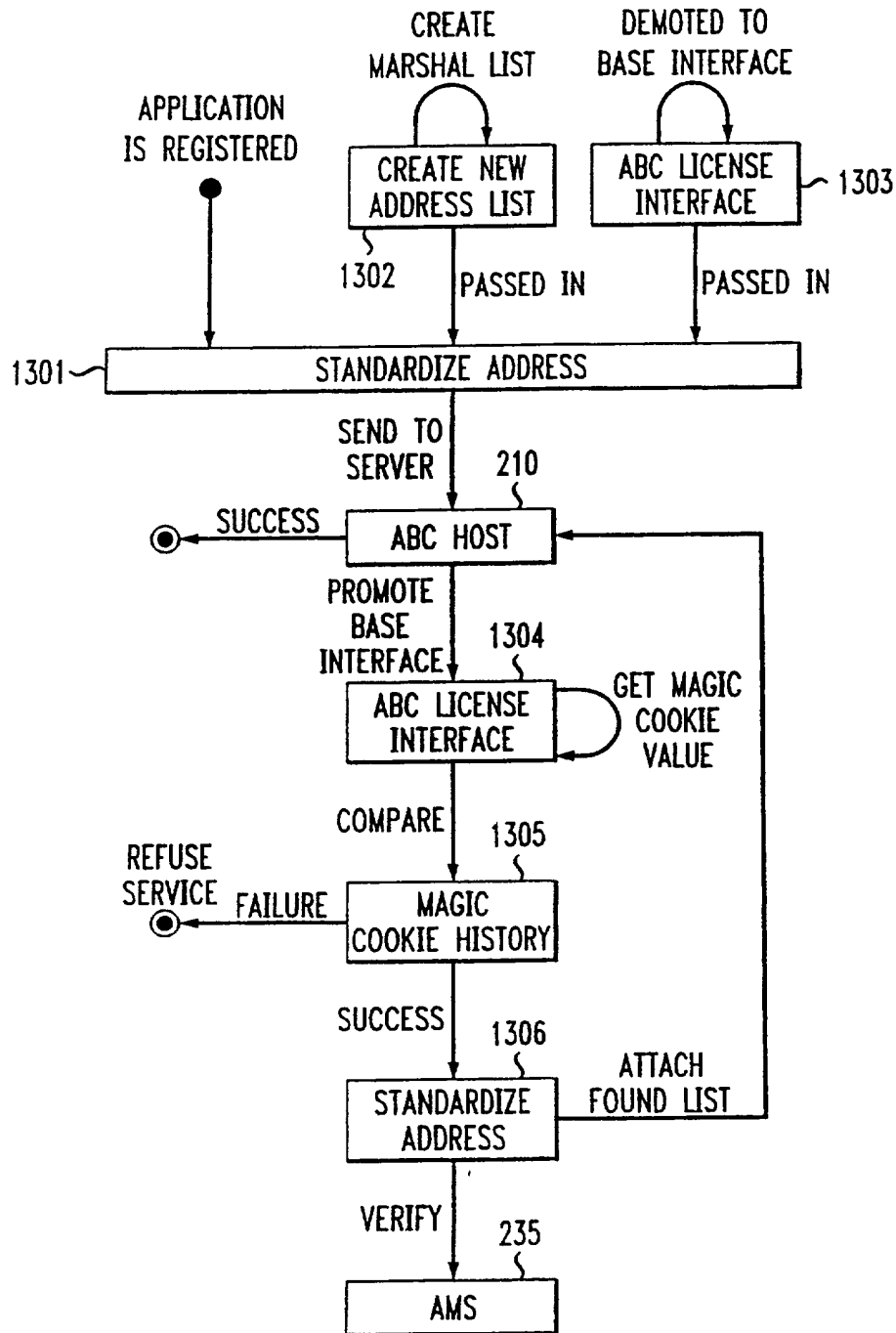
FIG. 12



13/15

FIG. 13

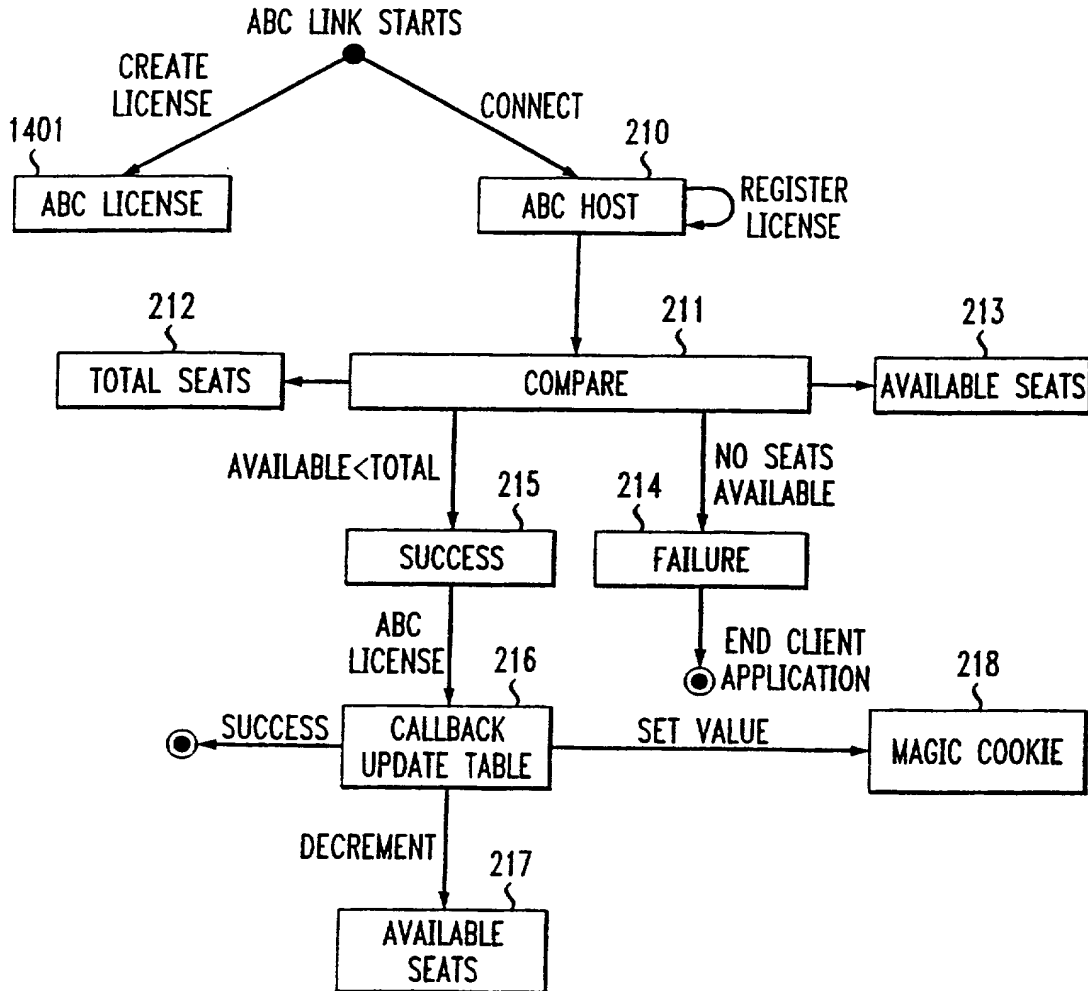
STANDARDIZED VALIDATION



14/15

FIG. 14

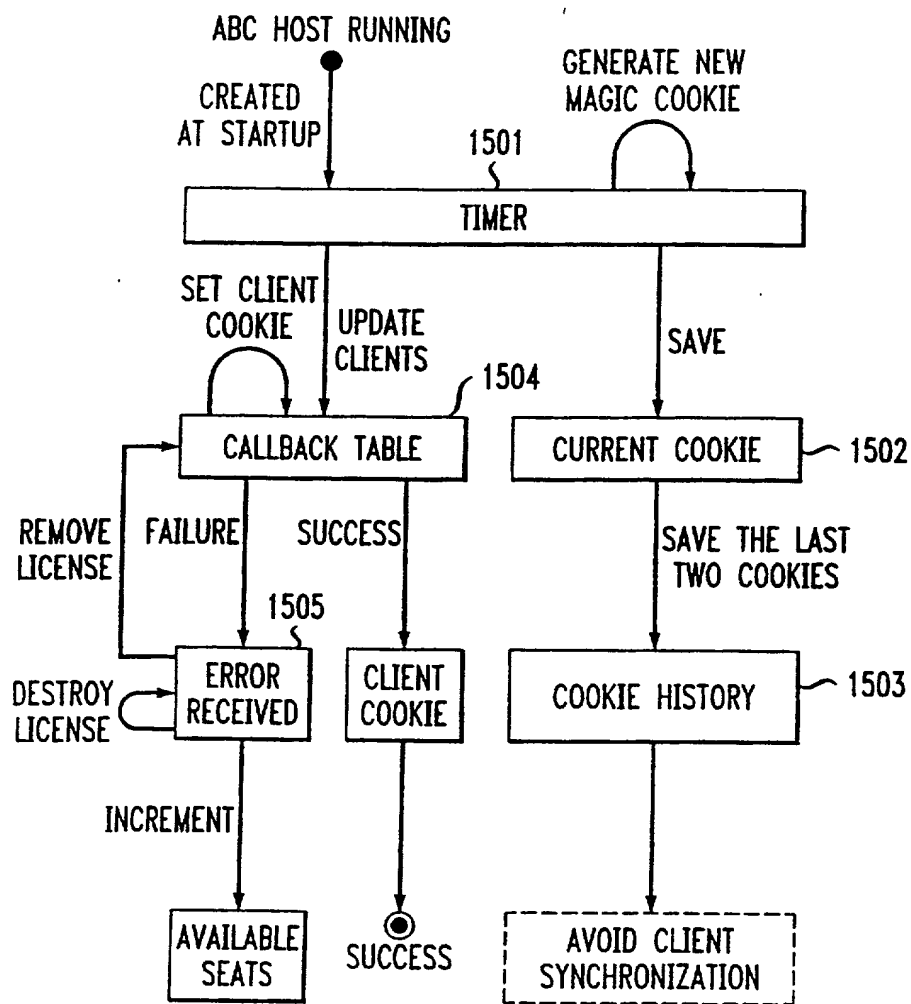
REGISTER LICENSE



15/15

FIG. 15

SEAT FEATURE ENFORCEMENT



DECLARATION AND POWER OF ATTORNEY FOR PATENT APPLICATION

English Language Declaration

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name,

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

Title: **METHOD AND SYSTEM FOR SHIPPING/MAILING**

the specification of which

(check one)

☐ is attached hereto.

X was filed on as United States Application No.: 09/830,498 or PCT
International Application Number PCT/US99/25508 filed 29 October 1999
and was amended on (if applicable) April 27, 2001

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, Section 119(a)-(d) or Section 365(b) of any foreign application(s) for patent or inventor's certificate, or Section 365(a) of any PCT International Application which designated at least one country other than the United States, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate or PCT International application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application(s)

(Number)	(Country)	(Day/Month/Year Filed)	<u>Priority Not Claimed</u>
PCT/US99/25508	PCT	29 October 1999	<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>

I hereby claim the benefit under 35 U.S.C. Section 119(e) of any United States provisional application(s) listed below:

60/106,066
(Application Serial No.)

29 October 1998
(Filing Date)

(Application Serial No.)

(Filing Date)

(Application Serial No.):

(Filing Date)

I hereby claim the benefit under 35 U.S.C. Section 120 of any United States application(s), or Section 365(c) of any PCT International Application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International Application in the manner provided by the first paragraph of 35 U.S.C. Section 112, I acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, C.F.R., Section 1.56 which became available between the filing date of the prior application and the national or PCT International filing date of this application:

(Application Serial No.)

(Filing Date)

(Status)
(patented, pending, abandoned)

(Application Serial No.)

(Filing Date)

(Status)
(patented, pending, abandoned)

(Application Serial No.)

(Filing Date)

(Status)
(patented, pending, abandoned)

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith. (list name and registration number)

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Page 4 of 4

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